

AMENDMENTS TO THE CLAIMS

The claims in this listing replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended): A lipid membrane structure containing an anti-membrane-type matrix metalloproteinase monoclonal antibody (anti-MT-MMP), wherein the lipid membrane structure contains a substance for binding the anti-MT-MMP to the lipid membrane structure and a blood retentive lipid derivative, and wherein the amount of the substance for binding the anti-MT-MMP to the lipid membrane structure is between 0.5 and 20 5 and 10 mol% based on the blood retentive lipid derivative in the lipid membrane structure.
2. (Previously Presented): The lipid membrane structure according to claim 1, wherein the anti-MT-MMP is present in a lipid membrane, on a surface of lipid membrane, in a internal space of lipid membrane, in a lipid layer, and/or on a surface of lipid layer of the lipid membrane structure.
3. (Previously Presented): The lipid membrane structure according to claim 1, which comprises the anti-MT-MMP as a component of the lipid membrane structure.
4. (Previously Presented): The lipid membrane structure according to claim 1, wherein the anti-MT-MMP binds to a membrane surface of the lipid membrane structure.

5. (Previously Presented): The lipid membrane structure according to claim 1, wherein the anti-MT-MMP consists of one or more kinds of monoclonal antibodies selected from an anti-MT1-MMP monoclonal antibody, an anti-MT2-MMP monoclonal antibody, an anti-MT3-MMP monoclonal antibody, an anti-MT4-MMP monoclonal antibody, an anti-MT5-MMP monoclonal antibody, and an anti-MT6-MMP monoclonal antibody.

6. (Previously Presented): The lipid membrane structure according to claim 1, wherein the anti-MT-MMP is a human monoclonal antibody or a mouse monoclonal antibody.

7. (Previously Presented): The lipid membrane structure according to claim 1, wherein the anti-MT-MMP is a Fab fragment, a F(ab')₂ fragment, or a Fab' fragment.

8. (Cancelled):

9. (Previously Presented): The lipid membrane structure according to claim 1, wherein the substance for binding the anti-MT-MMP to the lipid membrane structure is a lipid derivative that can react with mercapto group in the anti-MT-MMP or a fragment thereof.

10. (Previously Presented): The lipid membrane structure according to claim 1, which contains a phospholipid and/or a phospholipid derivative as a component of the lipid membrane structure.

11. (Original): The lipid membrane structure according to claim 10, wherein the phospholipid and/or the phospholipid derivative consists of one or more kinds of phospholipids and/or phospholipid derivatives selected from the group consisting of phosphatidylethanolamine, phosphatidylcholine, phosphatidylserine,

phosphatidylinositol, phosphatidylglycerol, cardiolipin, sphingomyelin, ceramide phosphorylethanolamine, ceramide phosphorylglycerol, ceramide phosphorylglycerol phosphate, 1,2-dimyristoyl-1,2-deoxyphosphatidylcholine, plasmalogen and phosphatidic acid.

12. (Previously Presented): The lipid membrane structure according to claim 1, which further contains a sterol as a component of the lipid membrane structure.

13. (Original): The lipid membrane structure according to claim 12, wherein the sterol is cholesterol and/or cholestanol.

14. (Cancelled):

15. (Cancelled):

16. (Currently Amended): The lipid membrane structure according to claim 1, wherein the blood retentive lipid derivative is a polyethylene glycol-lipid derivative compound or a polyglycerin-phospholipid derivative compound.

17. (Original): The lipid membrane structure according to claim 16, wherein the blood retentive lipid is a polyethylene glycol-lipid compound comprising at least one the polyethylene glycol-lipid derivative consists of one or more kinds of polyethylene glycol-lipid derivatives selected from the group consisting of N- {carbonyl-methoxypolyethylene glycol-2000}-1,2-dipalmitoyl-sn-glycero-3-phosphoethanolamine, N- {carbonyl-methoxypolyethylene glycol-5000}-1,2-dipalmitoyl-sn-glycero-3-phosphoethanolamine, N- {carbonyl-methoxypolyethylene glycol-750}-1,2-distearoyl-sn-glycero-3-phosphoethanolamine, N- {carbonyl-methoxypolyethylene glycol-2000}-1,2-distearoyl-sn-glycero-3-phosphoethanolamine and or N- {carbonyl-methoxypolyethylene glycol-5000}-1,2-distearoyl-sn-glycero-3-phosphoethanolamine.

18. (Previously Presented): The lipid membrane structure according to claim 1, which has a temperature change-sensitive function.

19. (Original) The lipid membrane structure according to claim 18, which contains a temperature-sensitive lipid derivative as a component in the lipid membrane structure.

20. (Original): The lipid membrane structure according to claim 19, wherein the temperature-sensitive lipid derivative is dipalmitoylphosphatidylcholine.

21. (Previously Presented): The lipid membrane structure according to claim 1, which has a pH-sensitive function.

22. (Original): The lipid membrane structure according to claim 21, which contains a pH-sensitive lipid derivative as a component of the lipid membrane structure.

23. (Original): The lipid membrane structure according to claim 22, wherein the pH-sensitive lipid derivative is dioleoylphosphatidylethanolamine.

24. (Previously Presented): The lipid membrane structure according to claim 1, which reacts with a membrane-type matrix metalloproteinase on a tumor cell membrane.

25. (Original): The lipid membrane structure according to claim 24, wherein the tumor cell is an MT-MMP expressing cell.

26. (Previously Presented): The lipid membrane structure according to claim 24, wherein the tumor cell is a cell of fibrosarcoma, squamous carcinoma, neuroblastoma, breast carcinoma, gastric cancer, hepatoma, bladder cancer, thyroid tumor, urinary tract epithelial cancer, glioblastoma, acute myeloid leukemia, pancreatic duct cancer or prostate cancer.

27. (Previously Presented): The lipid membrane structure according to claim 1, which reacts with a membrane-type matrix metalloproteinase of a neoplastic vessel.

28. (Previously Presented): The lipid membrane structure according to claim 1, wherein the lipid membrane structure is in the form of micelle, emulsion, liposome or a mixture thereof.

29. (Previously Presented): The lipid membrane structure according to claim 1, which is in a form of dispersion in an aqueous solvent, a lyophilized form, a spray-dried form or a frozen form.

30. (Previously Presented): A pharmaceutical composition comprising the lipid membrane structure according to claim 1 and a medicinally active ingredient and/or a gene.

31. (Original): The pharmaceutical composition according to claim 30, wherein the medicinally active ingredient and/or gene is present in a lipid membrane, on a surface of lipid membrane, in an internal space of lipid membrane, in a lipid layer and/or on a surface of lipid layer of the lipid membrane structure.

32. (Previously Presented): The pharmaceutical composition according to claim 30, which is in a form of a dispersion in an aqueous solvent, a lyophilized form, a spray-dried form, or a frozen form.

33. (Withdrawn): A method for estimating an amount of monoclonal antibody against an anti-membrane-type matrix metalloproteinase contained in the lipid membrane structure according to claim 1, wherein a competitive reaction against an antigenic substance caused by both of an enzyme-labeled monoclonal antibody, prepared from the monoclonal antibody against a membrane-type matrix metalloproteinase by a known

method, and the lipid membrane structure is detected by an enzyme immunoassay technique.

34. (New) The lipid membrane structure according to claim 1, wherein the blood retentive lipid comprises glycophorin, ganglioside GM1, phosphatidylinositol, ganglioside GM3, glucuronic acid derivative, or glutamic acid derivative.